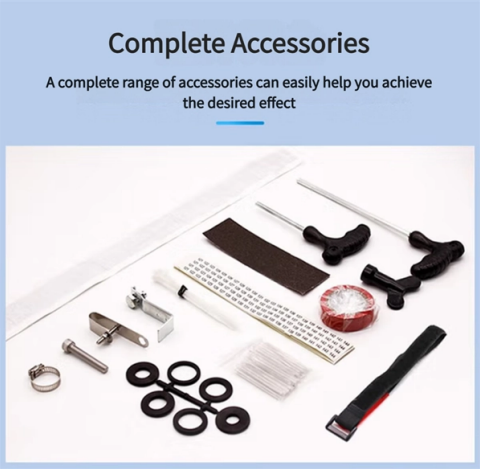
Laser Diode Packaging Manufacturers



Article Overview

Leading laser diode packaging manufacturers include ALTER, Finetech, LaseOptics, and TRUMPF, offering custom and standard module solutions for diverse photonics and industrial applications.

Key Manufacturers and Capabilities

ALTER specializes in custom laser diode modules with in-house assembly and testing. They provide a wide range of packaging platforms, including single-mode diode lasers, collimated VCSELs, and hermetic PIC packages. Their modules feature integrated thermal management via thermoelectric coolers and thermistors, and they support both prototype and volume production with space-qualified reliability standards . Finetech focuses on high-precision assembly for multi-emitter laser modules. They provide automatic die bonder systems and self-aligning placement tools to ensure micrometer-level alignment of edge-emitting laser diodes on submounts. Their process includes eutectic gold-tin soldering and multi-axis compensation for optimal power output and stability . LaseOptics offers custom 9mm laser diode packages with various wavelengths and power levels, suitable for applications such as currency authentication, telecom, biomedical, and defense. They also provide fiber optic solutions, lensed fibers, and tapered fibers for integration with laser modules . TRUMPF provides vertically integrated laser diode manufacturing, including single-emitter diodes, diode bars, and pump modules. Their products cover wavelengths from 790 nm to 1100 nm and are designed for industrial, scientific, automotive LiDAR, and additive manufacturing applications. TRUMPF offers modules with high reliability, thermal management, and options for vertical stacks and multi-kW arrays .

Considerations for Choosing a Manufacturer

Article Content

Laser-based packaging

Processes such as laser soldering, glass solder bonding, laser beam bonding for transparent and metallic materials or microwelding

High-power Laser Diode Assembly – ficonTEC Service

The laser diode is one of the most common devices used throughout photonics. The micro-assembly process calls for the placement

Laser Diodes

A Laser Diode is a type of semiconductor device that produces coherent light through the process of stimulated emission. Laser

Laser Diode Packaging Materials | Suppliers

Explore 13 top manufacturers and suppliers of Laser Diode Packaging Materials in our comprehensive photonics buyers'' guide.

Laser Diode Manufacturers

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Laser Diodes

Browse Our Laser Diodes by Wavelength Choosing the right laser diode starts with selecting the appropriate wavelength, output

Laser Diode Technology

The process of packaging laser diodes is very labor intensive and an expensive part of the manufacturing of these devices. Because

Photonics

From Photonic Integrated Circuits (PICs) to custom photonic packaging solutions, ALTER is at the forefront of advancing optical

Laser Diode Chips

We produce a comprehensive range of premium laser diode chips for diverse application scenarios, utilizing state-of-the-art quantum

GaN Laser Diodes – Bluglass

BluGlass offers GaN lasers to the industrial, defence, quantum, scientific, biotech and display markets. Our full suite, end-to-end

Laserland Supplier of Laser Diode, Laser Diode Modules, Laser Lens ...

Laserland focuses on laser manufacturing and sales for 10 years. We supply laser diodes, diode laser modules and of various sizes

Laser Diode Chips

Minimum orders for established designs start at 50 pieces, while custom designs require a non-recurring engineering (NRE) fee. We

Laser Diodes and Pump Modules

Laser Diodes and Pump Modules Whether it is diodes for extremely high reliability applications such as LiDAR pumping or high

Laser Diodes: Specification Guidelines | Lasers

For example, the high power laser diodes shown in Figure 1 need thermally compatible heat sinks that may compromise package

Laser Diode Packages

Laser Diode Bar Subunits diode package types. This allows for all package types to achieve a range of output powers and operating

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48 Laser Diode Manufacturers in 2026

48 Laser Diode Manufacturers in 2026 This section provides an overview for laser diodes as well as their applications and principles.

High Power Laser Diodes

Leonardo Electronics US is a leading innovator in high-power laser diode technology—designing, developing, and manufacturing

What are Laser Diodes? | TechWeb

A laser diode (semiconductor laser) is an electronic component that generates laser light by converting electric current

LPKF: High-volume precision processes for advanced semiconductor ...

LPKF delivers leading solutions for advanced semiconductor packaging, electronics and PCB manufacturing, plastic welding, and

Advances in High-Power Laser Diode Packaging

1. Introduction Rapid evolution of semiconductor laser technology and its declining cost during the last decades have made the

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: https://www.yachtchartercapetown.co.za
Email: info@yachtchartercapetown.co.za
Phone: +27 21 863 4927
Address: 1st Floor, The Towers, 1 St George's Mall, Cape Town, 8001, South Africa

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